

## An International Economy

The economy of Middle and Late Postclassic Mesoamerica was truly an international one. No single polity was self-sufficient (chapter 4), and no local or regional economic system was cut off from long-distance exchange networks. The expansion of commercial exchange throughout Mesoamerica—coupled with the intensification of intercommunication through symbols, styles, and codices—helped forge Mesoamerica into a single integrated economy. The tentacles of this international economy reached far into every Postclassic society, affecting not only political dynamics but also class structure, farming, religion, and numerous other institutions and processes that affected people's lives. This situation—an international economy that crossed political borders and affected myriad aspects of life for the bulk of the population—is the hallmark of ancient world systems. In this chapter we describe the contours of that economy.

### LAND AND LABOR

The bases for wealth and power in ancient Mesoamerica lay in land and labor. In this essentially agrarian economy, control over land and its yields not only embellished one's lifestyle, but also signaled political power. As noted in chapter 1, land and labor were more directly under the control of nobles and kings than were the institutions and processes of exchange.

### INTENSIVE AGRICULTURE

The Middle and Late Postclassic periods were a time of unprecedented agricultural intensification in many parts of Mesoamerica. In central Mexico, a record-level population surge led to the transformation of the entire landscape as hills, plains, and swamps were all turned into productive plots for growing maize and other crops. By

Frances F. Berdan, Marilyn A. Masson,  
Janine Gasco, and Michael E. Smith

1519 virtually every non-mountainous area saw the construction of some combination of irrigation canals, raised fields, terraces, and house gardens, as well as fields for rainfall agriculture (Donkin 1979; Doolittle 1990; Evans 1990; López 1991). Recent simulations of population and carrying capacity in the Basin of Mexico suggest that agricultural intensification did not keep up with population growth, at least in the Basin of Mexico piedmont zone (Whitmore and Williams 1998). The pattern of Postclassic agricultural intensification was repeated in other areas, including Guerrero (Armillas 1949), Oaxaca (Winter 1985; Woodbury and Neely 1972), and the Tarascan realm (Fisher et al. 1999; Street-Perrott et al. 1989; see also Rojas Rabiela 1985).

Agricultural features such as terraces, irrigation systems, and raised fields required considerable labor investment. The application of comparative and theoretical models to archaeological and ethnohistorical data suggests that terrace agriculture was most likely organized on the household level, whereas irrigation fields were more likely subject to some form of state or elite supervision (see Smith 1996a:59–79). The case for chinampas is less clear; there is less comparative data, and the archaeological remains have yet to be analyzed in much detail. Chinampas may have been built and farmed under direct state control or as privately held estates owned by the nobility, or they may have been under the control of local communities (Brumfiel 1991; Parsons 1991; Smith 1996a:78–79).

### LAND TENURE

In highland central and west Mexico, territoriality generally was directly associated with dynastic rulership. In central Mexico, some agricultural lands were designated for special purposes: *tlatocatalli* were lands supporting the ruler, *teopantalli* supported temples, and *milchimalli*

supported the army. In addition, *tecpantlalli* were lands belonging to the palaces of high-ranking nobles, *pillalli* were the patrimonial lands of the nobility, and *calpulalli* were lands pertaining to commoners residing in calpolli (Harvey 1984:84). Much of the land, and the labor required to make it productive, appears to have been controlled by persons occupying elevated political positions, by religious institutions, or by more communally oriented residential groups. The precise nature of communal control is unclear, however. This pattern from central Mexico compares fairly closely with that of the Tarascans of west Mexico, where lands in the core region were held by the state “to produce food directly consumed by the royal household, upper nobility, and temple attendants” (Pollard 1993:118).

This pattern contrasts significantly with the apparent pattern among the Maya. In Yucatán, land and labor were controlled through lineages, some of them merchant lineages (chapter 6). Similarly, highland Guatemalan K'iche'an land and labor were defined through “great houses,” which combined lineality, residence, and territoriality (chapter 5). Among the Tzotzil and Tzeltal of highland Chiapas (Calnek 1988:17–18), much of the land may have been administered by the community as a whole, with communal lands subdivided into lineage holdings which were further subdivided into individual parcels, or *calaghibal*. Higher-ranking towns—city-states, or *cabeceras*—claimed the rights to certain commodities (e.g., salt, cacao, and perhaps cotton) produced in subject towns as well as tribute in subsistence goods. In addition, high-ranking nobles apparently held private lands that were worked by individuals attached to the land. Finally, the nobility may have also controlled other lands (called “office-lands” by Calnek) where crops such as maize and beans were grown for consumption by noble households; labor on these lands may have been a special form of tribute.

In Oaxaca the Mixtec land-tenure system placed land under the jurisdiction of aristocrats heading local, kin-based kingdoms (Spoes 1967). A similar system is suggested for Zapotec kingdoms in the Valley of Oaxaca, where early colonial caciques controlled large territories that they presumably had also held in the Late Postclassic period (Appel 1982b:85–96; Oudijk 2000). The estates of local lords included agricultural lands worked by landless tenants, and other resources such as salt deposits and stone quarries. It is not clear if other lands were held, individually or communally, by non-nobles.

Warfare and conquest were persistent themes throughout Postclassic Mesoamerica. It was a customary and expected pattern for some of a conquered community's lands to be yielded to its conqueror, the dominating ruler then rewarding his valiant supporters with grants of these same lands (P. Carrasco 1999:37–39, 59, 145). Conquered communities typically were also required to

make tribute payments to their new masters. The complex and fluctuating history of warfare resulted, for any city-state, in a mosaic of control over land, tributes, and labor drafts: some control resided with the local ruler, some with a conquering ruler, some with an earlier conqueror, some with esteemed noble warriors—all of whom doubtless also held lands in other city-states (P. Carrasco 1999; Gibson 1971).

## CRAFT PRODUCTION

Beyond basic subsistence needs, Postclassic Mesoamerican peoples enhanced and embellished raw materials to produce a wide variety of utilitarian and luxury objects. These production processes entailed considerable knowledge, training, and labor organization.

### SPECIALIZATION AND THE ORGANIZATION OF PRODUCTION

The commercialized international economy of Late Postclassic Mesoamerica was based in part on a high level of specialized craft production. Here we break the concept of specialization into several separate dimensions in order to explore the variation in Postclassic production processes. Our scheme follows that of Costin (1991).

#### *Intensity of Production*

Although one of the first questions often asked about craft production and specialization concerns the intensity of the labor input—was it full-time or part-time?—this is one of the most difficult dimensions to document with archaeological and historical data. Nevertheless, a number of patterns have been suggested for Postclassic production intensity. In an influential paper, Brumfiel (1987b) suggested that in Aztec central Mexico artisans producing luxury goods—featherwork, jewelry, sculpture—were urban-based full-time specialists attached to elite patrons, whereas many producers of utilitarian goods—pottery, basketry, stone tools—were rural part-time producers who worked independently and marketed their own goods. In ethnographic and historical accounts of many peasant societies, part-time rural craft production is taken up to compensate for declining land access or declining yields (Cook 1982; Kellenbenz 1974; Thirsk 1961), and this is a likely context for the development of rural craft production in many parts of Postclassic Mesoamerica. Although documentary sources in central Mexico and Yucatán list numerous specialists (Brumfiel 1998; Clark and Houston 1998; Rojas 1986), it is often not clear whether individuals practiced their specialties full-time or part-time.

#### *Scale of Production*

In Postclassic Mesoamerica the scale of production ranged from the household to the workshop. Many important commodities were produced at the household

level rather than at the workshop or industrial scales. The lowest level of production, termed “household production” by Peacock (1982), involves production at home for domestic consumption within the household. Although low levels of household production probably existed for a variety of utilitarian goods, this kind of production for use has fewer external economic connections and implications than do the larger-scale and more complex patterns of production for exchange.

Household production for exchange, termed “household industry” in Peacock’s scheme, was widely practiced. Redundancy in production activities among Postclassic domestic zones within individual communities is a common observable pattern (Masson 2000a). Production of commodities such as textiles and ceramics was probably done at home on a part-time basis, with a small surplus destined for external exchange (chapters 32 and 34). Chert and chalcedony stone tool production in Belize, for example, was a home-based, part-time craft activity (Michaels 1987, 1994; Michaels and Shafer 1994). Other types of local production were carried out in marketplaces on demand. For instance, Feldman (1978:11) suggests that retail merchants in the highland Maya area produced and sold goods such as obsidian blades on this basis. Petty producers in Aztec markets performed similar activities (Anderson et al. 1976), and the presence of crucibles for smelting copper on the Maya trading canoe encountered by Columbus (chapter 1) suggests a similar pattern.

An example of variable specialization at the household level can be seen at the small Mayan island settlement of Laguna de On, where all domestic areas that were extensively tested yielded possible evidence of ceramic production in the form of features that might have been potting hearths (Masson 2000a). All domestic areas had spindle whorls. One area had greater proportions of lithic debris than other domestic zones, and another area had greater proportions of marine shell debris. No exclusive distributions of production or consumption debris were noted in areas tested at this settlement (chapter 34). These data suggest that household production was variable within this community. It is difficult to gauge the volume of production or the amount of surplus generated by each household, but the amount of debris is not great and suggests that cottage industries supported other activities of household maintenance at this small rural location. Similar patterns of low-level domestic craft production are reported at Aztec-period sites in Morelos (chapter 32).

A larger scale of production existed for several urban craft industries in central Mexico. The city-state center of Otumba had numerous areas with high concentrations of the remains of production of obsidian blades, bifaces, jewelry, figurines and other ceramic objects, and textiles of maguey fibers (Charlton et al. 1991; Nichols 1994;

Otis Charlton 1993). The localization of the artifact concentrations suggests either intensive household production or else workshops for these products. Many of the full-time luxury artisans working in Tenochtitlan were probably organized on a workshop level as well. Even so, the Codex Mendoza (Berdan and Anawalt 1992:3: f. 70r) suggests that luxury-craft skills were handed down within family units.

Some industries, such as obsidian extraction and salt production, were highly specialized, and their production approached an industrial scale (chapters 19, 20). These industries are archaeologically conspicuous because of the large quantities of debris and specialized facilities associated with production. An argument has been made that utilitarian ceramics in the Mayan area were mass-produced during the Postclassic period, since their form attributes are highly standardized (Rathje 1975; Sabloff and Rathje 1975b). These authors suggest that the standardization of ceramic form and the configuration of footed bowls were conducive to the transport of these artifacts in exchange around the Yucatán Peninsula. However, subsequent analysis of ceramic pastes has revealed that ceramics were made locally by most communities (Rice 1980), probably at the household level (Masson 2000a), and mass-production facilities for ceramic manufacture have yet to be located at any site. Increased standardization of paste attributes in areas such as the Petén may signify the monopolization of production by fewer specialized producers (Rice 1980). Many utilitarian and ritual ceramic forms bear close similarities at Postclassic Maya sites across the peninsula after A.D. 1150. This pattern is probably due to intensified economic interaction between the northern and southern lowlands after this time.

#### *Concentration of Production*

This dimension of specialization concerns the physical location of production facilities. Brumfiel’s (1987b) model of Aztec rural utilitarian crafts and urban luxury crafts, mentioned above, is relevant here. It is clear that throughout Postclassic Mesoamerica many crafts were produced in both rural and urban settings. There was considerable variation among Postclassic cities in the scale or concentration of craft industries. For example, consider Otumba, Huexotla, and Yautepec, all Aztec city-state towns of equivalent size and political status. Otumba was a major industrial center (Charlton et al. 1991), Huexotla had few craft industries beyond the ubiquitous textile production (Brumfiel 1980, 1987a), and Yautepec had a level of production intermediate between the two (chapter 32). Yautepec, in turn, had considerably more craft activity than rural sites in Morelos such as Cuexcomate and Capilco.

The concentrated production of particular goods in certain residential districts has been documented in the

archaeological record and from ethnohistorical accounts for a variety of crafts: the preparation of maguey cloth (Nichols 1994; Otis Charlton 1994), the working of obsidian objects (Otis Charlton 1993:160; Charlton 1994: 239), the fabrication of shell ornaments (chapter 34), and the fashioning of fine feathered items and manufacturing of precious stone and metal ornaments (Sahagún 1950–1982, book 9). The craft industries at Otumba varied in spatial location and concentration. For instance, obsidian core-blade and basalt workshops were scattered about the area, while lapidary, figurine, and maguey fiber workshops tended to be concentrated, perhaps into individual *calpolli* (Nichols 1994:182–183). With the exception of the centralized obsidian core-blade workshops, industries were located in residential areas, suggesting household-based production concentrated in specific community sections. Given their locations, these specialists were most likely independent operators rather than attached to elite patrons, and much of their production probably circulated through the region's lively marketplaces (Nichols 1994:184–186; Otis Charlton 1994). One exception may have been the lapidary specialists, who might have produced luxury objects for elite patrons (Otis Charlton 1994:198).

#### *The Production Process*

This dimension of specialization, not dealt with by Costin (1991), concerns issues such as the segmentation of tasks, level of standardization, and the volume of output. In complex economies like that of Postclassic Mesoamerica, the production of certain goods was frequently not limited to a single location. In many instances, a raw material was developed, altered, improved, and embellished in successive stages by different specialists on its way to becoming a finished and highly desired commodity. Consider, for example, the production of cotton clothing, a crucial commodity in the Postclassic world system. The evidence for cotton fiber and cloth production suggests a complex set of spatially separated sequences carried out across diverse regions.

While many inland valley areas of highland Mesoamerica qualified as cotton-growing areas (e.g., in present-day Morelos state), cotton was most widely grown along the coastal strips and long river valleys stretching inland from the Gulf and the Pacific. Cotton spinning and weaving, however, extended broadly across diverse ecological regions, from highland to lowland locales (with spindle whorls for cotton spinning being found widely across all inhabited elevations). Raw cotton was moved to spinners and weavers by the farmers and by long-distance merchants of the *oxtomeca* variety (Berdan 1987b, 1988). The context for exchange was most likely the many marketplaces in both the highlands and lowlands. Indeed, in Aztec times an especially lively

marketplace for cotton was at Aczacatlan, a highland community in the eastern Sierra.

Cotton cloth was often creatively and painstakingly embellished. Adornments included spun rabbit fur, spun feathers, and dyed threads for embroidery. Spun rabbit fur and the spun feathers of "ordinary birds" such as ducks and turkeys were sold in the Late Postclassic period at the grand Tlatelolco marketplace and may have been purchased there by the weaver herself. These embellishments also may have been added by the purchaser (or producer) of a plain cotton cloth who might then personalize the item or create a designated piece of tribute cloth or an item for further sale. This entire process is not fully understood, but it does appear that, at a specific level, the rabbit fur merchant also specialized in dyeing those furs (Sahagún 1950–1982, book 10:77), that dyes were produced and sold independently of spun threads (10:77), and that the marketplace seller of spun turkey and duck feathers also spun those feathers (10:92). So the creation of these embellishments involved specialists beyond the cotton spinners and weavers themselves.

Similar complexities in production processes can be seen for other commodities, particularly those destined for elite consumers, such as fine feathered adornments and valuable stone or metal jewelry. Each step and exchange of hands, of course, increased item's value (and cost).

#### *Social Context of Production*

Variation according to social status can be seen throughout Mesoamerica in the social context of various types of production. For instance, the distribution of spindle whorls at the highland Maya site of Canajaste suggests that spinning may have been an elite activity (Blake 1985:320), whereas at most Mesoamerican sites, virtually every domestic unit was engaged in spinning and probably weaving (Fauman-Fichman 1999; Masson 2000a, 2002). Ethnohistoric documentation stresses that every woman in Mesoamerica was expected to spin and weave (Berdan 1987a); some elite households may show a greater abundance of that activity due to polygynous practices.

In highland Mesoamerica some specialized production appears to have come under the control of specific groups, although "monopoly" is too strong a word to use. This is particularly the case in the production of luxury wares, which tended to be concentrated in urban contexts and performed by full-time specialists, sometimes under the sponsorship of elite patrons (Brumfiel 1987b). It is not surprising that producers of precious stone ornaments, shining metal jewelry, and fine featherwork would become concentrated and controlled: the raw materials were expensive, the training undoubtedly intensive, and the standards of elite consumers high.

### PRODUCTION AND COMMODITIES

Production processes can also be analyzed in terms of the types of commodities produced.

#### *Local Utilitarian Production*

The local production of utilitarian commodities is represented in the manufacture of items such as everyday textiles, ceramics, stone tools (of chert, chalcedony, and other local raw material), fishing implements, animal or plant products, and grinding stones. This type of production occurred at the household level in most communities, with variation according to locally available resources. It also tended to rely on generalized knowledge and skills, and while there was some specialization, this was not extensive. (Perhaps the greatest amount of specialization was found in ceramic production, which required a significant outlay of equipment such as kilns.) The variations in resource availability led to intercommunity exchange in areas such as central Mexico, Oaxaca, and northern Belize (Berdan et al. 1996; McAnany 1991). Many commodities were circulated first through local market exchange before entering the long-distance (including maritime) trade network for more distant destinations.

#### *Luxury Goods*

By at least the Late Postclassic in the Basin of Mexico, luxury goods were produced in both workshops and households, and those households were incorporated into broader residential organizations (see chapter 18 for further discussion of luxury commodities). These urban residential “guilds” regulated membership, controlled quality in production, provided training, and involved their members in specific religious activities (Sahagún 1950–1982, book 9). They included, most notably, the featherworkers, fine lapidaries, and metalworkers (of gold and silver). In Oaxaca, where such artisanship attained a remarkable level of sophistication, luxury artisans were members of the nobility (chapter 22). In northern Belize, there are very few categories of locally produced luxuries represented in the archaeological record. Indeed, luxuries in the Maya area were often imported (Kepecs et al. 1994). Shell jewelry and carved bone are possible luxury goods produced in the eastern Maya lowlands at sites like Laguna de On (Masson 1999a, 2000a, 2002), and Colha (Dreiss 1994), and shell ornaments were imported into zones such as the Maya highlands in completed form (Blake 1985:332).

#### *Production for Long-Distance Exchange*

Production geared toward long-distance exchange can be seen where relatively unique or superior resources were concentrated and were in demand at distant destinations as well as locally. Salt, obsidian, and cloth were utilitarian items that fell into this category for both central

Mexican and Mayan areas. Other products such as cacao, honey, wax, dyes, and animal products also were produced for intra-lowland and international exchange in the Mayan area (Blom 1932; Piña Chán 1978), and commodities such as cochineal, copal, and paper moved in a similar fashion in central Mexico (Berdan 1988). Variation existed in the scale of salt and other commodity production at different localities (chapter 19). For the most part, salt, obsidian, and cloth were probably produced for export in greater quantities than other commodities due to a high continuous demand for these items. Granitic or basalt metates from highland Maya areas are another category of utilitarian item that was exchanged to the lowlands and to coastal ports, although in lesser quantities than other long-distance commodities destined for daily use. Luxury goods also were manufactured for long-distance exchange, though in smaller quantities (see below).

### COMMERCIAL EXCHANGE

The Postclassic commercial economy entailed systems of transport, markets, money, traders and merchants, and international trade centers. Together these yielded vigorous economic interrelationships linking diverse polities and regions throughout the Mesoamerican world.

#### *TRANSPORT*

The technology of transportation in ancient Mesoamerica was quite rudimentary. Water transport using dugout canoes (like the ones encountered by Columbus and other European explorers; see discussion below) was relatively efficient but was largely limited to coastal routes (Edwards 1978) since only a few navigable rivers followed trade routes (Lec and Navarrete 1978). Overland transport costs, however, were quite high. Although the concept of the wheel was known—as evidenced in wheeled toys (Diehl and Mandeville 1987)—it was not put to work for transport purposes because of the lack of appropriate draft animals and the difficulties of the mountainous terrain in many areas (Hassig 1985). Thus on overland routes all goods had to be carried on people’s backs.

These transport cost factors had several implications for the increased exchange in the Late Postclassic economy. First, specialized groups of burden-bearers assumed important roles in commercial transport. Overland carriers, called *tlameme* in Nahuatl, became prominent in Aztec trade (Hassig 1985), and Maya merchants used slaves as canoe paddlers. Second, most long-distance trade goods were high-value luxury items and special nonluxuries with high levels of demand and relatively low bulk, such as obsidian and high-grade salt.

Energetic reconstructions show the inefficiency of transporting bulky goods such as grain, ceramics, or

ground stone over large distances, leading Drennan (1984a, 1984b) to postulate that long-distance ceramic exchange was never very extensive in ancient Mesoamerica. Smith (1990) responded that this is an empirical issue, and that in Postclassic central Mexico large quantities of decorated ceramics were exchanged over long distances (see also Smith 2001a; Smith, Neff, and Fauman-Fichman 1999). The fact that interregional ceramic exchange was so widespread, and that imported ceramic vessels were present in virtually all Middle and Late Postclassic commoner households (chapter 32), are indications of the high level of commercialized exchange in the Postclassic economy.

#### MARKET SYSTEMS AND MONEY

Marketplaces were a prominent feature of the Postclassic Mesoamerican landscape. Unfortunately, marketplaces leave little in the way of archaeological remains, and their presence and importance are largely gleaned from Late Postclassic documentary sources that portray the situation as it existed immediately prior to the arrival of the Spaniards. At that time, marketplaces were found throughout Mesoamerica but were especially common in regions that encouraged specialized production of a variety of products and hence required a venue for exchange of considerable quantities of utilitarian and luxury goods. Other regions were less diversified, yet the localization of important resources led to specialization of production in these areas as well.

Marketplaces varied in scale, function, and range. The largest and most diversified market in Mesoamerica in the Late Postclassic was at Tlatelolco, sister-city of the Mexica capital of Tenochtitlan. This metropolitan market may have served 20,000–25,000 people daily and 40,000–50,000 on every fifth day (Anonymous Conqueror 1971:392). Institutionally, this market contained judges and supervisors to assure order (possibly high-ranking members of the professional merchant “guilds”) and other officials to collect taxes on vendors. This was a multipurpose market serving the luxury needs of the most discriminating noble as well as the everyday needs of virtually anyone. Vendors ranged from well-traveled, professional high-status merchants who offered precious feathers and valuable stones, to regional merchants carrying bulky cotton and cacao from lowland sources, to local vendors who traded small lots of goods such as chiles, pottery, and firewood.

While the Tlatelolco market was an economic attraction, it was not the only trading venue. Specialized markets developed reputations for the availability and quality of certain products: dogs at Acolman; ceramics, cloth, and fine gourds at Texcoco; slaves at Azcapotzalco and Itzacan; and turkeys at Otumba and Tepepulco (Berdan 1985:346–349). Durán (1971:278) states that these specialized sites were established through adminis-

trative policy. However, those policies evidently did not dictate monopolies as all of the products listed above were common in markets throughout Mesoamerica.

Other markets enjoyed brisk activity and the attendance of local, regional, and long-distance merchants. Some of these, located along the fringes of major polities, can be considered borderland phenomena and exhibited some ambiguous characteristics of international trade centers. These included large markets at Cholula and Tepeacac along the Tlaxcalan/Aztec border in the early sixteenth century, at Coaixtlahuacan in Oaxaca in the mid-fifteenth century (Berdan 1985:354–355), and at Xicalanco on the Gulf coast (chapter 17). In the Mixteca Alta, and perhaps in the Valley of Oaxaca as well, borderland markets enabled populations of adjacent polities to exchange goods without having to cross each other's territory, and they may have also been linked to periodic religious celebrations and pilgrimages (Pohl et al. 1997).

Some markets are particularly interesting for how they integrated economic exchange with religion and politics. Cholula, for instance, was an important commercial and pilgrimage center that was also subject to some political manipulation when its market, like that of nearby Tepeacac, was required to stock jewels, precious stones, and fine featherwork (Durán 1971:278). While Cholula also drew travelers with religious goals, both it and Tepeacac also must have been havens for long-distance merchants dealing in high-value merchandise. These two markets were subject to political dictates that stimulated transregional trade and strongly encouraged professional merchants to cross politically defined borders.

Fairs were annual markets that integrated religious, commercial, and social activities (on fairs in general, see Allix 1922; Abu-Lughod 1989:51–75). Well known to the early explorers from Europe, fairs were mentioned from various parts of Mesoamerica. Freidel's (1981b: 378–381) pilgrimage-market fair model, featuring regularly scheduled calendrical festivities organized by community leaders, describes these important occasions for trade and exchange. Religious pilgrimage was closely linked to mercantile activity at the site of Cozumel (Freidel and Sabloff 1984). Feldman (1985:14, 56) also proposed that fairs were held on ritual occasions to promote trade between central Mexican traders and private traders from the Guatemalan highlands. References to markets in Tabasco associated with huge fairs and religious sanctuaries for pilgrimage are noted by Lee (1978:56; see also Blom 1932:545–546). Other market towns at the time of Spanish contact were of great commercial import but did not combine sacred and secular attributes. Freidel (1981b:381) refers to towns such as Chauaca and Conil as purely market towns where the primary activity was trade. Some markets observed in the Guatemalan highlands as early as the 1540s were held on a daily basis, and political officials presided to resolve

disputes (Feldman 1978:12). Kepecs (chapter 33) reviews documentary evidence for markets and commercialization in Late Postclassic Yucatán.

The documentation of market exchange in the archaeological record is not easy. Marketplaces are quite elusive at archaeological sites, and in their effort to distinguish market exchange from other, more politically controlled forms of exchange, archaeologists have recently turned their attention to the effects of different exchange systems on household inventories. Hirth (1998) and Smith (1999) have argued that marketplace exchange results in the distribution of high-value goods to many households, irrespective of social class. In contrast, elite gift exchange and other politically controlled exchange systems distribute luxury goods exclusively to elites. In applications of this approach, Smith (chapter 32) and Masson (chapter 34) find such nonexclusive distributions of imported luxury goods (i.e., at both commoner and elite residential contexts) at sites in Morelos and northern Belize.

Market exchanges were facilitated by the use of various types of money as media of exchange. The most commonly mentioned money form was cacao beans, which served as widely distributed “small change.” Although cacao was grown in various lowland areas (Bergmann 1969), Soconusco was the leading producer in Postclassic times (chapter 35). The use of cacao as money is known from central Mexico (Rojas 1998) to Yucatán (Piña Chán 1978) and as far south as Nicaragua, where Oviedo y Valdés described cacao beans as follows: “They guard them and hold them in the same price and esteem as the Christians hold gold or coin; because these almonds are regarded as such by them, as they can buy all things with them” (Oviedo y Valdés 1853:1:316, in Tozzer 1941:95 n. 417).

Exchanges of more highly valued goods were facilitated by the broadly accepted *quachtli*, or large white cotton capes (Rojas 1998). Another significant money form was the T-shaped bronze or copper “money-axe,” which may have served not only as a medium of exchange, but also as a standard of value and a storage of wealth, albeit in a more restricted geographic arena (chapter 21). For Yucatán, Landa and other sources mention the use of various items as money: copper bells, T-shaped copper axes, red shells (perhaps *Spondylus* sp.), precious stones, and cacao (Piña Chán 1978:43). In highland western Guatemala, salt was noted as a form of money alongside cacao, textiles, and copper axes (Feldman 1985:21–23). The presence of these various forms of money in the Mesoamerican world system is another indicator of the high level of commercialization of the Postclassic economy. In addition, the development of money forms suggests some standardization in exchange processes across the world system.

## MERCHANTS

Starting with their very first contacts with Mesoamerican peoples, the European explorers were impressed with native merchants, who ranged widely and carried a diversity of commodities along coastal routes. The canoe encountered by Columbus (chapter 1), with 25 people and a large supply of trade goods, was sufficiently noteworthy to be recorded in several written accounts (see Edwards 1978:199–204; Sauer 1966:128–129). Two decades later Cortés encountered a trade canoe loaded down with salt and maize that had just left from a “canoe port” along the north coast of Honduras (Edwards 1978:204).

Merchants from Xicalanco, an international trade center (chapter 17) along the Gulf coast, complained to Cortés that their trade with the east coast of Yucatán had been disrupted by Spanish activities. These coastal merchants had a broad knowledge of distant peoples and places; the first notice the Spaniards had of the Pueblo peoples of New Mexico came from a merchant’s report to Nuño de Guzmán on the Gulf coast near Pánuco (Sauer 1966:129). The goods carried in the dugout canoes were all key commodities in the Postclassic world system: cacao, copper axe-money, copper/bronze bells, obsidian tools and weapons, decorated textiles, and salt (chapter 18).

Early descriptions from diverse areas of Mesoamerica suggest the existence of two types of professional merchants in many areas: high-status merchants who traded in luxury goods and were either members of the nobility or belonged to guilds that restricted membership; and regional merchants of lower status who often specialized in fewer commodities traded within individual regions. In addition, many market vendors were part-time, petty traders who sold goods produced by themselves or by their families; these individuals can be considered a third type of merchant. These three types are documented most fully in sources from the Basin of Mexico, but evidence from other areas suggests that similar patterns held in most of Mesoamerica.

### *Petty Vendors*

At the smallest scale were local individuals marketing small quantities of their own surplus production, including relatively inexpensive commodities such as foodstuffs, herbs, pottery, baskets, and firewood. In these cases, household producers engaged in marketing as part of their overall economic strategies and typically did not travel far to attend a market. Early descriptions of the Tlatelolco market suggest that most of the sellers were petty vendors of this type, and Sahagún (1950–1982, book 9) provides the names and descriptions of many types of petty vendors. In highland Guatemala, petty vendors (termed “retailers” by Feldman [1985]) known as

*ajaqabali* in Kaqchikel were also “the most common of all merchants” (Feldman 1985:21). These included artisans (such as obsidian workers) who made their products to order in the marketplace. Petty vendors are suggested for Tarascan markets in the *Relación de Michoacán* (Pollard 1993:113).

#### Regional Merchants

Beyond these many individuals were full-time regional traders who carried more-valuable goods across regions, traveling from market to market in an effort to gain a profit (Berdan 1988). The presence of a large number of these merchants (called *tlanecuilo* in Nahuatl) is indicative of the high degree of commercialization in the Mesoamerican world system. These merchants were instrumental in moving large quantities of “bulk luxuries” such as cotton, cacao, and salt over considerable distances and rough terrain, making these commodities broadly available beyond their more restricted production zones (chapter 33).

In his description of highland Guatemala, Feldman (1985:20–21) calls these merchants “petty traders.” Compared to the high-status merchants, regional merchants made shorter trips and often dealt in a single commodity such as salt. The cotton vendors and fishmongers in Yucatán mentioned by Landa (Tozzer 1941:53 n. 294) were probably regional merchants, as were the itinerant peddlers described by Roys (1943:51–52) who carried their own packs (chapter 33). Pollard (1993:171–172) notes that neither Aztec *pochteca* nor Tarascan state merchants—both high-status merchants—crossed the Tarascan/Aztec border, and thus the cross-border exchange discussed in chapter 14 was probably in the hands of regional merchants—perhaps Otomí or Matlatzincan peoples—from the border area.

#### High-Status Merchants

This category of merchant received the most attention by early writers. In Aztec central Mexico, the high-status merchant category is represented by the *pochteca*, professional merchants who resided in specific *calpolli* in several Basin of Mexico cities. Membership in the *pochteca* organization was strictly limited. These merchants were not only successful entrepreneurs, but also very well connected politically. The Tlatelolco merchants, for instance, carried merchandise on expeditions on their own behalf as well as for the Mexica ruler, who, it appears, used these individuals as diplomatic envoys to extra-empire trade centers (Sahagún 1950–1982, book 9). In addition, these merchants were politically active in serving as spies (*coztomeca*) for the Mexica ruler and in overseeing the largest marketplace in the realm, Tlatelolco (Berdan 1978). The *pochtecas*' status was somewhat ambiguous in Aztec society: they were of commoner birth, but they

provided essential goods and significant services to the state and to nobles, and many of them were accumulating enviable wealth by the time of the Spanish arrival. Less is known about Tarascan high-status merchants, but available information suggests even closer links to the state; indeed, Pollard (1993:119) calls these traders “state long-distance merchants.”

In other parts of Mesoamerica high-status merchants were members of the elite. Many polities in Yucatán, for example, were ruled by merchants. We know of a Cocom lord who avoided the massacre at Mayapán because he was away on a trading expedition to Honduras (Roys 1962:33). Piña Chán (1978:44) quotes Herrera y Tordesillas as follows: “In this land of Acalan, they used to make the wealthiest merchant the lord, and thus it was Apoxpalon who had great trade... [and] agents in many towns where fairs were held.” Two Maya terms for merchant are often mentioned, but it is not clear what these meant, nor how they correspond to our categories here: ‘*pplom*’ meant “professional merchant,” and ‘*ab pplom yoc*’ meant “traveling merchant” (chapter 33).

In highland Guatemala, too, merchants were nobles. Chiapaneca lords, for example, went on long trading expeditions. The number of such high-status merchants in this area was quite low, suggesting restricted membership (Feldman 1985:20–21). In the small polities of the Mixtec and Zapotec areas of Oaxaca, merchants and luxury craftsmen were junior members of the nobility. The merchants undertook long expeditions to distant regions where they traded in luxury goods and the primary materials used in the manufacture of jewelry and other fine objects used for display, gifting, and bridewealth (chapter 22). The head merchant encountered by Columbus (chapter 1) was probably a high-status merchant, judging by the diversity of commodities carried, the size of the expedition (25 persons, including slave paddlers), and the haughty behavior of the head merchant when he first encountered the Europeans (Edwards 1978).

The cases reviewed above show two patterns for high-status merchants. In areas where small polities remained the sole political form, high-status merchants were members of the local nobility. In the Aztec and Tarascan empires, however, independent groups of high-status merchants came into existence. These merchants—the Aztec *pochteca* and Tarascan state merchants—served dual roles as agents of the state and as independent entrepreneurs. Several authors have suggested that in Aztec society the *pochteca* formed an emerging middle class between the nobility and the commoners (Sanders 1992; Hicks 1999).

#### INTERNATIONAL TRADE

Long-distance trade augmented and enhanced the availability of localized resources and manufactured goods

among the many polities of the Mesoamerican world system. High-status merchants were the primary agents of this trade. While they traded in marketplaces throughout Mesoamerica, these entrepreneurs focused their energies at strategically located international trade centers that provided especially inviting and attractive venues for their commercial activities (chapter 17). At these locales, far-ranging merchants established and maintained contacts that transcended their own homelands, thus fostering an international flavor to the economy.

In the Maya area, such long-distance trading activity is known primarily through two sources of information: historical documents and the identification of exotic materials such as obsidian, greenstone (and other minerals), and metals at sites where they are not locally available. Ethnohistoric documents describe the circum-peninsular ties of northern Maya merchants (Scholes and Roys 1948:3; Sabloff and Rathje 1975b) and the travels of Aztec *pochteca* from highland bases to lowland trade centers (Sahagún 1950–1982, book 9). One example is the Cocom lord mentioned above who escaped assassination during the overthrow of Mayapán because he was away on a trading expedition to the Bay of Honduras. Trade centers were located around the peninsula during the Postclassic (chapter 17), and merchants who frequented these centers played an important role in distributing commodities produced in various territories of the Yucatán Peninsula as well as those obtained from more-distant locations.

The ports of Xicalanco and Potonchan were critical gateways between the Maya polities and those of the Gulf Coast, the isthmus, and highland Mexico (chapter 17). Merchant mercenaries from Tabasco were interested in the economy of the Maya peninsula, and their repeated interference with the regimes of Mayapán in northern Yucatán (Barrera and Morley 1949: table 6) attests to their desire to maintain political links that would promote international trade. While Mayapán exerted considerable power in the territories of northwestern Yucatán that surrounded it, its political control was weaker in territories of the northeast, the east coast, and the southern lowlands (Pollock 1962:11; Roys 1962). The site was influential in nonpolitical respects in these territories through promoting trade, forming political alliances, and disseminating religious doctrine that local elites adopted to promote their own prestige. Merchants in these eastern/southern territories probably negotiated their own trading relationships with Xicalanco (chapter 5).

Luxury items were major foci of long-distance inter-regional exchange. Cacao from Tabasco and Honduras was imported into northern Yucatán in substantial quantities for use as currency (Tozzer 1941:37; Scholes and Roys 1948:3; Bergmann 1969). Other luxuries imported

into the Maya area were obsidian, gold, bronze, turquoise, dyed rabbit fur, and slaves (chapter 21). Luxury items traded from Xicalanco into the Aztec realm included tanned feline skins, carved tortoise shell, and precious stones such as amber and jade (Scholes and Roys 1948:29). While the international trade centers (chapter 17) served as lively exchange venues for luxury goods, they also were the scene of less prestigious exchanges. Aztec *pochteca*, for instance, carried trade goods attractive and appropriate to commoners as well as nobles from the Basin of Mexico to lowland Xicalanco (Sahagún 1950–1982, book 9).

In the Late Postclassic, merchants from the Basin of Mexico (and associated with Aztec imperial expansion) were particularly active. While most of these *pochteca* confined their entrepreneurial efforts to the imperial territory, others were granted special privileges to trade beyond the imperial boundaries in lucrative international trade centers such as Xicalanco. From the perspective of the Basin of Mexico, these merchants were especially active in acquiring high-value, low-bulk luxury objects and raw materials for consumption by the Aztec elite. These prestigious materials included tropical feathers, jaguar pelts, fine objects made of precious stones and metals, and cacao (see Berdan 1987b, 1992b). While these same products and goods were paid in tribute to the Aztecs by some of their richly endowed conquered provinces, this tribute was clearly not sufficient to meet the expanding standard of living of a burgeoning nobility.

#### POLITICALLY CONTROLLED EXCHANGE

Not all exchange in the Postclassic world system was open and commercialized. Ancient Mesoamerican forms of politically controlled exchange such as tribute and elite gift exchange continued to function in Postclassic times. One interesting feature of these exchange mechanisms in the Postclassic period was their close connection to commercialized exchange and the other institutions of the world system.

#### TRIBUTE

Tribute—a one-way, vertical transfer of goods and services—was the primary mechanism for financing expensive state enterprises and lavish standards of living for the elite. It also required an established hierarchy of officials to collect, record, and distribute this incessant flow of goods. Frequent and sustained military conflict in Postclassic times often resulted in the dominance of one city-state over others. One goal of such conquest was the exaction of tribute from subjugated peoples, and these demands accentuated the vertical movements of goods and services already entrenched in the hierarchical order of individual city-states themselves. In the best-

documented example, at the time of Spanish contact the Aztec empire demanded regularly scheduled tribute payments from 38 conquered provinces and maintained "client" relations with 17 others (Berdan et al. 1996).

Such imperial tribute demands had important economic consequences. First, they stimulated an increase in local production in order to satisfy these additional requirements. Foodstuffs, textiles, raw materials, and specialized manufactures produced in the provinces were all transferred to the urbanized Basin of Mexico through tribute channels. This tribute had serious effects on donor areas. After Aztec conquest of the Cuauhnahuac area of Morelos, for example, the region experienced increased agricultural and textile production along with a decreased standard of living (chapter 32). Smith warns us, however, to also consider the possibility that other, more-localized economic processes may have contributed to the changes (Smith and Heath-Smith 1994).

A second significant consequence of imperial tribute imposition was the stimulation of long-distance exchange. Many tribute goods—particularly the elaborate feathered warriors' costumes—were manufactured from products that did not occur naturally in the tributary regions, and as a result provincial rulers or others had to engage in commercial exchange to obtain the products or raw materials demanded by the Aztec empire. Thus imperial tribute directly stimulated exchange in provincial areas; indeed this was part of a deliberate economic strategy on the part of the Aztec rulers (Berdan et al. 1996: 124, 135).

It should be kept in mind that, under Aztec hegemony, conquered nobles were obligated to give service and/or goods to a more powerful ruler, and conquered commoners paid in service and goods to not only their own ruler-ship, but to the imperial powers as well. The quantities of goods and the extent of service moving vertically were considerable, but it is difficult to determine if the burdens were onerous. In one reconstruction of tribute levels from early Colonial documents, Smith (1994b) concluded that although imperial tribute in Morelos was modest at the household level (given the area's high population), the intermediate levels of tribute—to city-states and local nobles—were almost certainly quite a bit higher. Aztec imperial tribute quantities and collection procedures varied greatly by province, as documented in the *Codex Mendoza* (Berdan and Anawalt 1992). Variation in tribute among, or "gift giving" requirements for, Aztec client states ("strategic provinces") is summarized in chapter 6.

The Tarascan imperial administration appears somewhat more uniform and regular than that found in the Aztec empire. At the most basic level, tributes collected at the local level were partially allocated to the support of locally based state officials. The remaining amounts were

passed on to regional centers, from where they were delivered to Tzintzuntzan or to military installations on the borderlands (chapter 13).

The centrally administered tribute systems of the Aztec and Tarascan empires contrast markedly with tribute in the smaller states of Oaxaca and the Maya region. None of the Late Postclassic Mixtec, Zapotec, or Maya polities held territories as large as those of the Aztecs or Tarascans, so tribute collection operated on a much smaller scale. Among the Mixtecs and Zapotecs the rulers of *cacicazgos*, or city-states, exacted tribute in goods and services from their subject populations; tribute was then redistributed to other members of the nobility, to religious and craft specialists, to servants and tenant farmers, and on ceremonial occasions to the population at large (Appel 1982a: 139–141; Spores 1967, 1984; Oudijk 2000).

In Yucatán, tributes for the Middle-to-Late Postclassic Mayan polity of Mayapán included foodstuffs and clothing for the palace, military obligations, and other forms of service (Roys 1962:50). In the Guatemalan and Chiapas highlands, it is generally assumed that small Maya polities, as well as the expansionistic K'iche' polity, exacted tribute from subject communities. Several highland Guatemala polities controlled territories in the neighboring Pacific coastal lowlands, where they sent administrators to ensure the flow of tribute to the highland centers; tribute consisted of both goods and services (Orellana 1995:40–41). For highland Chiapas, there is little direct evidence regarding Postclassic tribute practices, but a sixteenth-century Tzeltal dictionary includes native words for "tribute payer," presumably referring to a Precolumbian social category (Calnek 1988:34).

#### GIFT EXCHANGE

Not all meaningful economic exchanges took place through markets or tribute channels. Elites frequently engaged in reciprocity and gift giving to solidify political relations and social standing. Throughout the Mesoamerican world system, the elevated status of elites was overtly exhibited, and one's achievements and social position were signaled with ostentatious displays of grandeur. Although no actual accounting exists, considerable quantities of luxuries must have passed hands as elite marriages were arranged, political alliances cemented, and a ruler's underlings rewarded for loyal service. Many of these transactions took place at restricted elite feasting events; Pohl (1994a, 1998a, 1999) has described these for the polities of the Mixteca-Puebla region (chapters 10, 22, 31); Smith (1986) and Brumfiel (1987b) review the evidence for feasting at Aztec imperial elite gatherings.

Some of this gift giving was relatively symmetrical, some asymmetrical. Gift giving among rulers of city-

states appears to have been normative. Durán (1994:170, 340) describes two occasions in which rulers of enemy city-states were invited to Tenochtitlan by the Mexica ruler. The host impressed his recalcitrant visitors with lavish presents, including exquisitely worked clothing, sandals, featherwork, jewelry of gold and fine stones, and jaguar pelts. These gifts provided economic and display dimensions to the definition of social and political ties.

In asymmetrical contexts, cotton clothing was most commonly bestowed on underlings by rulers in a manner suggesting a personal payment for services. For instance, at differing events, the Mexica ruler bestowed clothing on priests for their role in religious ceremonies (e.g., Durán 1994:173, 306, 307) and on valiant warriors for their successful efforts on the battlefield (Sahagún 1950–1982, book 8). Other rulers presented Mexica emissaries with precious clothing, flowers, and tobacco (Durán 1994:333). Alonso de Zorita describes some of these events: “The lesser lords made gifts to the supreme ruler at certain festivals held every year; they did this in acknowledgement of their subjugation and vassalage. . . . When a festival had ended, the supreme ruler gave to the lesser lords, his vassals, and to the lords of neighboring towns who attended these festivals, rich cloaks and other presents, according to the quality of each lord. Thus these lords departed content and well rewarded for what they had brought” (Zorita 1963:188–189).

In imperial settings such as that described by Zorita, gift giving has a clear “display” dimension, but in areas where city-states were of a more equal standing, symmetrical reciprocity had the consequence of economically cementing meaningful social and political relationships (chapter 22). In either case, there were economic consequences beyond the more overt political aspects. In the first place, city-state rulers required sustained supplies of sumptuous luxuries for distribution, entailing the availability of precious raw materials and the “employment” of skilled artisans to fashion those materials into exquisite objects worth giving. For reliability, this may suggest a patron relationship. Second, highly valued luxuries changed hands across city-states and regions without the intervention of merchants, markets, or international trade centers. Despite the high degree of commercialization of the economy, other mechanisms for distributing goods operated in the Mesoamerican world system.

#### INTEGRATION OF THE ECONOMY

The Postclassic Mesoamerican economy was multidimensional. Economic units and processes were integrated and interwoven through political decisions and institutions, through commercialization and entrepreneurship, and through international relations and exchanges.

#### POLITICAL INVOLVEMENT IN THE ECONOMY

The degree of political control over the Postclassic Mesoamerican economy varied both by region and by economic sector. In some polities, particularly the Tarascan empire (chapters 13, 29) and the small states of the Mixteca-Puebla region (chapters 10, 22), many aspects of production and exchange were heavily influenced by political processes and institutions. In other areas, notably Aztec central Mexico and the Yucatán Peninsula, much of the economy was more open and commercialized. The greatest distinction in political control, however, was between economic sectors. In most Mesoamerican polities, land and labor were strongly controlled by nobles and the state, whereas most exchange processes (apart from tribute and gift exchange) were relatively autonomous of political control.

Throughout Postclassic Mesoamerica the basic economic factors of land and labor were predominately controlled by political leaders, whether they were city-state rulers and nobles (central and west Mexico), heads of lineages (the Maya area), or kin-based lords of kingdoms (Oaxaca). These elite with political power commanded rights to agricultural yields, personal services, and tribute in-kind from workers attached to those lands. These arrangements became more hierarchically complex following conquest, with suzerainty over conquered lands and labor claimed by conquest states or imperial powers.

Political control over craft production, while intense in a few cases, does not appear to have been pervasive. Extractive industries were situated largely on the fringes of political dominion and not directly administered by large polities, although Tarascan political control over copper mines in west Mexico may represent an exception. More direct political involvement can be seen in centralized urban contexts, particularly in the manufacture of luxury objects. Since the primary consumers of these products were members of the elite, some luxury artisans were directly attached to palaces (particularly in the Mixteca-Puebla politics described by Pohl in chapter 22), while others were concentrated in residential districts that controlled membership, production, and quality in exclusive, guildlike settings. Similar political control can be seen with the organization of professional merchants. In the Basin of Mexico, some of these *pochteca* traveled with state goods, acted as spies, and served as marketplace judges. In the Mayan exchange sphere, merchant lineages combined entrepreneurial interests with political power.

Although city-state rulers in many areas exercised rights to taxation in their marketplaces (Hicks 1986), most evidence suggests that the market systems and long-distance exchange systems were autonomous commercial institutions that flourished partly because they were outside of direct political manipulation (Blanton 1996). In

some areas, as in Tlaxcala, political control may have been more intense; there the market was said to belong to the ruler of Ocotelulco (Blanton 1996:51). Nevertheless, the dominant characteristics of marketplace exchange in Postclassic Mesoamerica were its pervasiveness, independence, fluidity, and high degree of commercialization.

#### COMMERCIALIZATION AND ENTREPRENEURSHIP

As seen above, polities exercised some measure of proprietorship and control over commercial institutions. These same polities, however, stimulated commercial ventures and entrepreneurship. The stature of Mayan merchant lineages, for example, was based on success in trading ventures; Aztec imperial tribute demands often required a conquered populace to trade for goods in local or more distant markets; and professional merchants sponsored by city-states also traded aggressively in their own merchandise.

A further indication of increased commercialization involves the accumulation of wealth based on nonpolitical criteria. In central Mexico, there was considerable variation in property levels among commoners (Harvey 1984), suggesting that some were acquiring wealth through supplementary specialized production and/or commercial undertakings. Similarly, professional merchants differed in affluence, some achieving an abundance of riches (Sahagún 1950–1982, book 9). Commercialization had developed so extensively in the Postclassic that many merchants trading over regional and long distances could engage in trading on a prosperous full-time basis (Berdan 1988). Both markets and international trade centers were targets for the entrepreneurial ambitions of these traders. An essential contribution of the international trade centers to the world system was their role in stimulating exchanges across political borders and integrating merchants from distinct and distant polities.

The importance of commercialized marketplace exchange is also revealed at the level of the consumer. Households at even the smallest rural settlements in highland Mexico and lowland Belize had access to a wide variety of imported goods, including luxury goods also used by local elites (chapters 32, 34; see discussion above of Hirth's model). Markets and their impacts were felt strongly not only in highly urbanized contexts, but at all levels of society.

#### AN INTEGRATED INTERNATIONAL ECONOMY

The general processes identified here for the Postclassic economy—namely, an expansion of economic activity with a variety of complex institutional and processual contexts—took place across all of Mesoamerica and began well before the expansion of the Aztec empire. While the most detailed and voluminous evidence for markets, professional merchants, craft specialization, and tribute

comes from Aztec records, we can adequately document all of these institutions for other areas of Mesoamerica and conclude that markets and commercial enterprises, in general, increased dramatically during the course of the Postclassic period.

Production efforts and exchange activities provided an interconnected web of spatial and hierarchical links. Both production and exchange enterprises transcended individual city-state polities in Late Postclassic Mesoamerica. In some cases, production of a single commodity required the hands of different specialists in separate city-states, or even regions, to reach its finished form, creating bonds of economic expectations. In addition, the uneven geographical distribution of resources encouraged specialization in production, with desirable products and commodities available in specific and known locales. These circumstances stimulated exchange specialists, and the movements of goods through polities and across regions often entailed the services of petty, regional, or long-distance merchants who carried not only merchandise but also information, ideas, and sometimes political clout.

Material goods and obligatory services also moved vertically through the hierarchical social and political structures of Postclassic Mesoamerica. Some production activities in workshop contexts may have been attached to rulers or other noble patrons; this patron-client relationship also pertained to some professional merchants who carried their rulers' goods for trade in distant areas. These production and mercantile activities were geared toward supplying elite consumers with prestige goods, and in some cases required the world system's most spatially far-flung relationships (chapter 17).

Tribute imposition, the most overt of the vertical economic links, served to channel surplus production vertically within and beyond individual city-states. In doing so, it also required, in some cases, the intensification of existing horizontal marketing ties, as well as the spread of local styles and designs in production. This can be seen in the payments of decorated textiles to Aztec emperors in the Late Postclassic: the designs do not derive from the Aztec repertoire, but from their provincial places of origin (Berdan and Anawalt 1992). In these economic movements, then, influence was from the bottom up as well as from the top down.

These economic relationships did not take place in isolation, but were tightly woven into the complex social, economic, and religious institutions of the Mesoamerican world system. Production was household-based, kin-based, or guild-based; it was "independent" or "attached"; it was completed by one individual/group, or by more than one; and it was directed toward universal, specialized, or elite consumers. Exchange took place in a variety of marketplace settings, at international trade centers, or

through tribute, and was engaged in by a mosaic of merchants and traders with small-scale goals or heightened ambitions. Economic activities therefore not only linked the Mesoamerican world system along territorial dimensions, but also, given their high degree of commercializa-

tion, permeated the many dimensions and levels of Mesoamerican life. A particularly commercialized facet of the Postclassic economy was found at international trade centers, the subject of the next chapter by Gasco and Berdan.